

1. BASIC INFORMATION

Module	Operations management in the Sector of Digital Technologies
Degree program	Máster Universitario en Dirección de Empresas MBA
School	Facultad de Ciencias Económicas, Empresariales y de la Comunicación
ECTS	6
Credit type	Optional
Language	English and Spanish
Delivery mode	Campus bases & online (only in Spanish)
Semester	Second semester
Academic course	2024/2025
Module Coordinator	Noel González
Teachers	Noel González, Pablo Gonzalo, Antonio de la Torre, Fernando Muñoz, Ángel Andreu

2. PRESENTATION

The Operations Management module is focused on training students to implement operations plans that guarantee the efficiency and productivity of a national or international company in the Sector of Digital Technologies.

Operations is one of the functional areas of vital importance for the achievement of a company's strategic position. Operations management is fundamental within business management and operations are the source and support of business strategies. Likewise, their relationship with the other functional areas has synergistic effects, the result of which is the achievement of high profitability in the corresponding sector. For the integral development of a person who aspires to occupy management positions in a company, it is necessary to know and deepen in this subject.

3. LEARNING RESULTS

Knowledges:

- KNO01. Explain how businesses are run, including planning, organizing, leading, and controlling an organization.

- KNO05. Recognize factors that affect a company's ethical and sustainable practices, including risks related to environmental and social impact, and efforts to minimize them

Skills:

- SK01. Make decisions considering various internal and external business factors.
- SK04. Critically assess environmental, social, and governance risks affecting the company's future.
- SK06. Design optimal business management structures that are ethically sound and aligned with sustainable development goals.

Competencies:

- CP06. Show business leadership skills in scenarios focused on strategic planning, conflict resolution, motivation, talent attraction, and professional ethics.
- CP08. Analyse and apply advanced operational business management tools aligned with strategic goals.
- CP09. Design plans for different areas (marketing, communication and sales, finance, production, human resources), using coordination criteria among them and aligned with the company's overall strategy.

4. CONTENTS

The contents are grouped into the following learning units:

- General aspects of the Operations Management: Operations management function, operations strategies as a competitive weapon, operations in the digital technologies Sector.
- Operations Strategies: the development of the product, the development of the technological processes, the productive capacity and the localization, specific strategies in the digital technologies Sector.

Operations Management: strategic initiatives, logistics and supply chain, demand forecasting, procurement management.

- Materials Management: Inventory management, storage management, physical distribution, informatics and logistic outsourcing.
- Planning of the activities: Planning and Production Control: MRP, TOC, DBR. Excellence in Manufacturing: JIT, LEAN, Kanban system.

System of improvement of the operations: the quality assurance, the systems of improvement: Kaizen and Quality Management Total, the Economic management of maintenance, the workstation: means and systems of improvement.

5. TEACHING-LEARNING METHODOLOGIES

The following are the types of teaching-learning methodologies to be applied:

- Master class.

- Case method.
- Cooperative learning.
- Problem-based learning.
- Project-based learning.

6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

Presential modality:

Training activity	Number of hours
Master classes	36
Debates and colloquiums	8
Case Analysis	4
Troubleshooting	20
Oral presentations of work	2
Preparation of reports and writings	15
Tutoring	8
Autonomous work	25
Research and projects	30
Face-to-face assessment tests	2
TOTAL	150

Online modality (only in Spanish):

Training activities	Number of hours
Synchronous master classes	20
Reading content topics	28
Debates and colloquia through virtual seminars	3
Case analysis	4
Troubleshooting	25
Oral presentations of synchronous works	2
Preparation of reports and written assignments	10
Virtual tutoring	8
Autonomous work	20

Scientific/case studies and projects	9
Virtual forum	9
Group participatory activities (seminars, participation in online forums, etc.) through web conference	10
Virtual assessment tests	2
TOTAL	150

7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

Presential Modality:

Evaluation system	Weight
Oral presentations	20%
Case/problems	15%
Reports and writings	15%
Performance assessment	10%
Assessment test	40%

Online modality (only in Spanish):

Evaluation system	Weight
Oral presentations	15%
Case/problems	15%
Reports and writings	15%
Performance assessment	5%
Assessment test	50%

In the virtual campus, when you access the course, you will be able to consult in detail the evaluation activities to be performed, as well as the due dates and evaluation procedures for each of them.

7.1. Ordinary call

In order to pass the course in the ordinary exam, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade higher or equal to 4.0 in the classroom knowledge test, so that it can be averaged with the rest of the activities.

For face-to-face students (presentiel modality), it is compulsory to attend classes as a necessary part of the continuous evaluation process and to comply with the student's right to receive advice, assistance and academic monitoring by the teacher. Failure to attend more than one third of the face-to-face classes may result in the loss of the right to take the presentiel knowledge test.

7.2. Extraordinary call

In order to pass the course in the ordinary exam, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade higher or equal to 4.0 in the classroom knowledge test, so that it can be averaged with the rest of the activities.

The activities that were not passed in the ordinary exam must be handed in, after having received the corresponding corrections from the teacher, or those that were not handed in.

8. CHRONOGRAM

The chronogram with dates of delivery of evaluable activities of the course is available in each edition and group in the virtual campus.

Actividades evaluable	Semana
Activity 1	4
Activity 2	8
Activity 3	12
Activity 4	14
Assessment test	16

This schedule may be subject to modifications due to logistical reasons. Any modification will be notified to the student in due time and form.

9. BIBLIOGRAPHY

The following is a bibliography related to the topics to be covered in the units

Unit 1:

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones estratégicas. Madrid: Pearson Education.
- Porter, Michael E. (1988b), "La Competencia en las Industrias Globales" Información Comercial Española, nº658, pp,71-100.
- Fondo Monetario Internacional (2000). Informe del año 2000. La globalización: amenaza u oportunidad.
- Rosander, A.C.,(1992), La búsqueda de la calidad en los servicios, Díaz Santos, Madrid.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
- Richard B. Chase y F. Robert Jacobs (2009). Edición 13. Administración de Operaciones. Producción y Cadena de Suministro. Madrid: McGraw-Hill Education.

Unit 2

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones estratégicas. Madrid: Pearson Education.
- Domínguez Machuca, J. A.; García, S.; Domínguez Machuca, M.; Ruiz, A. y Álvarez Gil, M. J. (1995). Dirección de Operaciones: aspectos estratégicos en la producción y los servicios. Madrid: McGraw-Hill-Interamericana de España, S.A.
- Rosander, A.C. (1992), "La búsqueda de la calidad en los servicios", Díaz Santos, Madrid.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
- Fernández Sánchez, E., Avella Camarero, L y Fernández Barcala, M (2006), "Evolución de los sistemas productivos pp 20-46", en "Estrategia de Producción", McGraw-Hill-Interamericana de España, S.A.U.
- Richard B. Chase y F. Robert Jacobs (2009). Edición 13. Administración de Operaciones. Producción y Cadena de Suministro. Madrid: McGraw-Hill Education.

Unit 3.

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones estratégicas. Madrid: Pearson Educación.
- Domínguez Machuca, J. A.; García, S.; Domínguez Machuca, M. ; Ruiz, A. y Álvarez Gil, M. J. (1995). Dirección de Operaciones: aspectos estratégicos en la producción y los servicios. Madrid: McGraw-Hill-Interamericana de España, S.A.
 - Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
 - Richard B. Chase y F. Robert Jacobs (2009). Edición 13. Administración de Operaciones. Producción y Cadena de Suministro. Madrid: McGraw-Hill Education.

Unit 4

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones estratégicas. Madrid: Pearson Educación.
- Domínguez Machuca, J. A.; García, S.; Domínguez Machuca, M. ; Ruiz, A. y Álvarez Gil, M. J. (1995). Dirección de Operaciones: aspectos estratégicos en la producción y los servicios. Madrid: McGraw-Hill-Interamericana de España, S.A.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
- Richard B. Chase y F. Robert Jacobs (2009). Edición 13. Administración de Operaciones. Producción y Cadena de Suministro. Madrid: McGraw-Hill Education.
- Gerd Leonhard “Tecnología versus humanidad: El futuro choque entre hombre y máquina” Fast future Publishing Ltd 2016.

Unit 5

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones tácticas. Madrid: Pearson Educación.
- Domínguez Machuca, J. A.; García, S.; Domínguez Machuca, M. ; Ruiz, A. y Álvarez Gil, M. J. (1995). Dirección de Operaciones: aspectos tácticos en la producción y los servicios. Madrid: McGraw-Hill-Interamericana de España, S.A.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
- Norris, G., et all (2001), “Del ERP al E-Business”, Ediciones Deusto S.A.
- Anaya Tejero, J.J. (2007), Logística Integral, ESIC.
- Pau i Cos, Jordi, (1998), Manual de logística integral, Díaz Santos, Madrid.
- Zermatti, Pierre, (2004), Gestión de stocks, Madrid: Pirámide.
- Iniciación a la codificación GS1-128. (AECOC) Asociación Española de codificación comercial (www.aecoc.es)
- Recomendaciones RAL para la Logística. www.aecoc.es
- Little's Law John D.C. Little and Stephen C. Graves Massachusetts Institute of Technology D. Chhajed and TJ. Lowe (eds.) Building Intuition: Insights From Basic Operations Management Models and Principles.
- to pull or not to pull: what is the question? Wallace J. Hopptand Mark L. Spearman Department of Industrial Engineering and Management Sciences North-western University

- Understanding the fundamentals of KANBAN and CONWIP pull systems using simulation Richard P. Marek, Debra A. Elkins, Donald R. Smith Department of Industrial Engineering Texas A&M University 238 Zachry Engineering Centre College Station, TX 77843-3131, U.S.A.
- Manual técnico de carretillas elevadoras Vicenç Ripoll. Iftem Almacenática S.L (2008) Logística Integral Bureau Veritas Formación. FC Editorial (2011)

Unit 6

- Heizer, Jay y Render, Barry (2001). Dirección de la producción y de operaciones: decisiones tácticas. Madrid: Pearson Educación.
- Domínguez Machuca, J. A.; García, S.; Domínguez Machuca, M.; Ruiz, A. y Álvarez Gil, M. J. (1995). Dirección de Operaciones: aspectos tácticos en la producción y los servicios. Madrid: McGraw-Hill-Interamericana de España, S.A.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). Fundamentos de dirección de operaciones. Madrid: McGraw Hill.
- Harmon, Roy L., y Peterson, Leroy D., (1990), "Reinventar la fábrica: cómo introducir mejoras sensibles en la producción industrial" (Un estudio realizado por Anderson Consulting), CDN. Ciencias de la Dirección.
- Ruiz Canela López, José (2003) La gestión por Calidad Total en la empresa moderna, Editorial RaMa, Madrid-México.
- Fernandez, S. E., Avella, C. L, y Fernández B. M. (2006), "Estrategia de Producción" Mac GrawHill, 2^a edición, Madrid.
- Suárez, M.F., (2007.), "El Kaizen: La filosofía de Mejora Continua e Innovación Incremental detrás de la Administración por la Calidad Total", Panorama Editorial, Madrid.
- Ikujiro Nakajima, S., (1989), "Mantenimiento productivo total en Japón", En Yasuhiro Monden: El estilo japonés de dirección de empresas, T.G.P.
- Morris, Daniel, y Brandon, Joel (1994), "Reingeniería: Cómo aplicarla con éxito a los negocios", McGraw-Hill, Colombia.
- Goldratt, E.M., (2005), La Meta: Un proceso de mejora continua, Díaz Santos.
- Monden, Yasuro,(1996), "El "Just in Time" hoy en Toyota: nuevo estudio de Yasuhiro Monden autor de "El sistema de producción de Toyota", Bilbao: Deusto.
- Jones, Daniel T. y Womack, James P. (2005). Lean thinking: cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa. Gestión 2000.
- Jeffrey K. Liker. "Las claves del éxito de Toyota" (2010), Ediciones Gestión 2000 • Eric Ries "El método Lean Start up", Deusto SA Ediciones

Supplementary bibliography:

- Anaya Tejero, J.J. (2007). *Logística Integral*, ESIC.
- Cuatrecasas Arbós, Lluís (2011). Dirección de operaciones. Editorial Díaz de Santos. Madrid.
- Davis, Mark M., Aquilano, Nicholas J. y Chase, Richard B. (2001). *Fundamentos de dirección de operaciones*. Madrid: McGraw Hill.
- Fernandez, S. E., Avella, C. L, y Fernández B. M. (2006), "Estrategia de Producción" MacGrawHill, 2^a edición, Madrid.
- Goldratt, E.M., (2005), *La Meta: Un proceso de mejora continua*, Díaz Santos.

- HEIZER & RENDER. (2015). Dirección de la producción y operaciones (2 tomos). Pearson Prentice Hall. Nueva York. 2015.
 - Jones, Daniel T. y Womack, James P. (2005). *Lean thinking: cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa*. Gestión 2000
 - Richard B. Chase y F. Robert Jacobs (2009). Edición 13. *Administración de Operaciones. Producción y Cadena de Suministro*. Madrid: McGraw-Hill Education.
- Suárez, M.F., (2007.), "El Kaizen: La filosofía de Mejora Continua e Innovación Incremental detrás de la Administración por la Calidad Total", Panorama Editorial, Madrid.
- Zermatti, Pierre, (2004), *Gestión de stocks*, Madrid: Pirámide.

10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance, Diversity and Inclusion Unit (ODI) we offer support to our students throughout their university life to help them achieve their academic achievements. Other pillars of our action are the inclusion of students with specific educational support needs, universal accessibility in the different campuses of the university and equal opportunities.

This unit offers students

1. Accompaniment and monitoring by means of counselling and personalised plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made, that is, in terms of methodology and assessment, for those students with specific educational support needs, thereby pursuing equal opportunities for all students.
3. We offer students different extracurricular training resources to develop different competences that will enrich their personal and professional development.
4. Vocational guidance through the provision of tools and counselling for students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students who need educational support can write to us at: Students with specific educational support needs:

orientacioneducativa@universidadeuropea.es

11. SATISFACTION SURVEYS

Your opinion matters! Universidad Europea encourages you to participate in satisfaction surveys to detect strengths and areas for improvement about the faculty, the degree program and the teaching learning process.

Surveys will be available in the survey area of your virtual campus or through your e-mail. Your assessment is necessary to improve the quality of the degree.

Thank you very much for your participation.